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BILL ANALYSIS

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Senate Bill 7 (as introduced 1-10-07)
Sponsor: Senator Liz Brater
Committee: Energy Policy and Public Utilities

Date Completed: 9-12-07

CONTENT

The bill would create a new statute to do all of the following:

-- Require the Public Service Commission (PSC) to adopt regulations establishing minimum efficiency standards for certain new products.
-- Beginning January 1, 2010, prohibit the sale in Michigan of new products (other than residential pool pumps) that did not meet the efficiency standards, and extend the prohibition to residential pool pumps beginning January 1, 2012.
-- Beginning one year after the sale of certain products became subject to the bill's requirements, prohibit the installation for compensation of a product that did not meet the efficiency standards.
-- Require the PSC to determine if implementation of the standards applicable to specified boilers, heaters, and furnaces required a waiver from Federal preemption, and require the PSC to apply for any necessary waiver.
-- Require the manufacturers of products subject to the bill to test samples of their products, certify that their products were in compliance with the standards, and identify each product offered for sale or installation as being in compliance.
-- Authorize the PSC to test products for compliance with the standards and inspect retailers and distributors of the products.
-- Require the PSC to investigate alleged violations and report the results to the Attorney General.
-- Authorize the Attorney General to institute enforcement proceedings.
-- Require the PSC to issue a warning for a first violation, and prescribe a maximum civil fine of $250 for subsequent violations.
-- Authorize the PSC to promulgate rules to implement and enforce the bill.

Legislative Findings

The bill states that the Legislature finds all of the following:

-- "That efficiency standards for certain products sold or installed in the state assure consumers and businesses that the products meet minimum efficiency performance levels thus saving money on utility bills."
-- "That efficiency standards save energy and reduce pollution and other environmental impacts associated with the production, distribution, and use of electricity, natural gas, and oil."
-- "That efficiency standards can make electricity systems more reliable by reducing the strain on the electricity grid during peak demand periods."
-- "Improved energy efficiency can reduce or delay the need for new power plants, power transmission lines, and power distribution system upgrades."
-- "That energy efficiency standards contribute to the economy of this state by helping to better balance energy supply

and demand, thus reducing pressure for higher natural gas and electricity prices."
-- "By saving consumers and businesses money on energy bills, efficiency standards help the state and local economy, since energy bill savings can be spent on local goods and services."

Scope of the Bill

The bill would apply to the following types of new products sold, offered for sale, or installed in the State after the bill's effective date:

-- Bottle-type water dispensers.
-- Commercial boilers.
-- Commercial hot food holding cabinets.
-- Compact audio products.
-- Digital versatile disc (DVD) players and DVD recorders.
-- Liquid-immersed distribution transformers.
-- Medium voltage dry-type distribution transformers.
-- Metal halide lamp fixtures.
-- Pool heaters.
-- Residential furnaces and residential boilers.
-- Residential pool pumps.
-- Portable electric spas.
-- Single-voltage external AC to DC power supplies.
-- State-regulated incandescent reflector lamps.
-- Walk-in refrigerators and walk-in freezers.
-- Any other products designated by the PSC.

The bill would not apply to any of the following:

-- New products manufactured in the State and sold outside the State.
-- New products manufactured outside the State and sold at wholesale inside the State for final retail sale and installation outside the State.
-- Products installed in mobile manufactured homes at the time of construction.
-- Products designed expressly for installation and use in recreational vehicles.

Efficiency Standards

Adoption. Within one year after the bill's effective date, the PSC would have to adopt regulations establishing minimum efficiency standards for the types of new products subject to the bill. The regulations would have to provide for all of the minimum efficiency standards described below.

Bottle-Type Water Dispensers. Bottle-type water dispensers designed for dispensing both hot and cold water could not have standby energy consumption greater than 1.2 kilowatt-hours per day, as measured in accordance with the test criteria contained in version 1 of the U.S. Environmental Protection Agency's (EPA's) "Energy Star Program Requirements for Bottled Water Coolers", except units with an integral, automatic timer could not be tested using Section D, "Timer Usage", of the test criteria.

("Water dispenser" would mean a factory-made assembly that mechanically cools and heats potable water and that dispenses the cooled or heated water by integral or remote means. "Bottle-type water dispenser" would mean a water dispenser that uses a bottle or reservoir as the course of potable water.)

Commercial Boilers. The thermal efficiency of commercial boilers, as determined in accordance with Hydronics Institute testing standard BTS 2000, "Method to Determine Efficiency of Commercial Space Heating Boilers", could not be less than 80% for gas-fired commercial boilers and 82% for oil-fired commercial boilers.

("Commercial boiler" would mean a boiler with a heat input rate of 300,000 BTU per hour or more that is shipped complete with heating equipment, mechanical draft equipment, and automatic controls. The term would include a factory-built boiler manufactured as a unit or system, disassembled for shipment, and reassembled at the site of installation.)

Commercial Hot Food Holding Cabinets. These products would have to have a maximum idle energy rate of 40 watts per cubic foot of interior volume, as determined by the "idle energy rate-dry test", in ASTM F2140-01, "Standard Test Method for Performance of Hot Food Holding Cabinets" published by ASTM International.

Interior volume would have to be measured in accordance with the method shown in the EPA's "Energy Star Program Requirements

for Commercial Hot Food Holding Cabinets" as in effect on August 15, 2003.

("Commercial hot food holding cabinet" would mean an appliance that is a heated, fully-enclosed compartment with one or more solid doors, and that is designed to maintain the temperature of hot food that has been cooked in a separate appliance. The term would not include heated glass merchandising cabinets, drawer warmers, or cook-and-hold appliances.)

Compact Audio Products. Compact audio products could not use more than two watts in standby-passive mode for those without a permanently illuminated clock display and four watts in standby-passive mode for those with a permanently illuminated clock display, as measured in accordance with International Electrotechnical Commission test method 62087:2002(E), "Methods of measurement for the power consumption of audio, video, and related equipment".

("Compact audio product", also known as a mini, mid, micro, or shelf audio system, would mean an integrated audio system encased in a single housing that includes an amplifier and radio tuner, attached or separable speakers, and can reproduce audio from magnetic tape, CD, DVD, or flash memory. The term would not include products that can be independently powered by internal batteries, have a powered external satellite antenna, or can provide a video output signal.)

DVD Players & Recorders. Digital versatile disc players and DVD recorders could not use more than three watts in standby-passive mode, as measured in accordance with International Electrotechnical Commission test method 62087:2002(E).

("Digital versatile disc player" and "DVD recorder" would mean commercially available electronic products encased in a single housing that includes an integral power supply and for which the sole purpose is the decoding, production, or recording of digitized video signal on a DVD. "DVD recorder" would not include models that have an electronic programming guide function that provides an interactive, onscreen menu of television listings, and that downloads program information from the vertical blanking interval of a regular television signal.)

Medium Voltage Dry-Type Distribution Transformers. These products would have to meet minimum efficiency levels 3/10 of a percentage point higher than the class 1 efficiency levels for medium voltage distribution transformers specified in Table 4-2 of the "Guide for Determining Energy Efficiency for Distribution Transformers" published by the National Electrical Manufacturers Association, NEMA Standard TP-1-2002.

("Medium voltage dry-type distribution transformer" would mean a transformer that has an input voltage of more than 600 volts but less than or equal to 34,500 volts, is air-cooled, does not use oil as a coolant, and is rated for operation at a frequency of 60 hertz.)

Liquid-Immersed Distribution Transformers. These products would have to meet minimum efficiency levels of 2/10 of a percentage point higher than the class 1 efficiency levels specified in Table 4-1 of the NEMA "Guide for Determining Energy Efficiency for Distribution Standards".

("Liquid-immersed distribution transformer" would mean a transformer that has an input voltage of 34,500 volts or less, has an output voltage of 600 volts or less, uses oil or other liquid as a coolant, and is rated for operation at a frequency of 60 hertz.)

Metal Halide Lamp Fixtures. Metal halide lamp fixtures designed to be operated with lamps rated greater than or equal to 150 watts but less than or equal to 500 watts could not contain a probe-start metal halide ballast.

("Metal halide lamp" would mean a high-intensity discharge lamp in which the major portion of the light is produced by radiation of metal halides and their products of dissociation, possibly in combination with metallic vapors. "High-intensity discharge lamp" would mean a lamp in which light is produced by the passage of an electric current through a vapor or gas and in which the light-producing arc is stabilized by bulb wall temperature and the arc tube has a bulb wall loading in excess of three watts per square centimeter. "Metal halide lamp fixture" would mean a light fixture designed to be operated with a metal halide lamp and a ballast for a metal halide lamp. "Ballast" would mean a device used with an electric

discharge lamp to obtain necessary circuit conditions, such as voltage, current, and waveform, for starting and operating the lamp.)

Pool Heaters. Pool heaters would have to be equipped with an intermittent ignition device and the thermal efficiency of pool heaters could not be less than 80%, as measured in accordance with the Federal test method for measuring the energy consumption of pool heaters contained in Federal regulations.

("Pool heater" would mean an appliance designed for heating nonpotable water contained at atmospheric pressure, including heating water in swimming pools, spas, hot tubs, and similar applications.)

Portable Electric Spas. Portable electric spas could not have a standby power greater than $5(V^{2/3})$ watts where V equals the total volume in gallons.

("Portable electric spa" would mean a factory-built electric spa or hot tub, supplied with equipment for heating and circulating water.)

Residential Furnaces & Boilers. Residential furnaces and boilers would have to comply with the annual fuel utilization efficiency (AFUE) and electricity ratio volumes shown in Table 1.

Table 1

Product Type	Minimum AFUE	Maximum Electricity Ratio
Natural gas- and propane-fired furnaces	90%	2.0%
Oil-fired furnaces ≥ 94,000 BTU/hour in capacity	83%	2.0%
Oil-fired furnaces < 94,000 BTU/hour in capacity	83%	2.3%
Natural gas-, oil-, and propane-fired hot water residential boilers	84%	n/a
Natural gas-, oil-, and propane-fired steam residential boilers	82%	n/a

The bill would allow the Commissioner to adopt rules to exempt compliance with the residential furnace or residential boiler standards at any building, site, or location where complying with the standards would be in conflict with any local zoning ordinance, building or plumbing code, or other rule regarding installation and venting of residential furnaces or boilers.

("Residential furnace" would mean a self-contained space heater designed to supply heated air through ducts of more than 10 inches in length and that uses only single-phase electric current, or single-phase electric current or DC current in conjunction with natural gas, propane, or home heating oil, and to which all of the following apply:

-- It is designed to be the principal heating source for the living space of one or more residences.
-- It is not contained within the same cabinet as a central air conditioner whose rated cooling capacity is above 65,000 BTU per hour.
-- It has a heat input rate of less than 225,000 BTU per hour.

"Residential boiler" would mean a self-contained appliance for supplying steam or hot water that uses natural gas, propane, or home heating oil, and that has a heat input rate of less than 300,000 BTU per hour.)

Residential Pool Pump Motors. Residential pool pump motors could not be split-phase or capacitor start-induction run type motors. Pool pump motors with a capacity of one horsepower or more would have to have the capability of operating at two or more speeds with a low speed having a rotation rate that was not more than one-half of the motor's maximum rotation rate. Motor controls would have to have the capability of operating the pump at at least two speeds. The default circulation speed would have to be the lowest speed, with a high-speed override capability being for a temporary period not to exceed one normal cycle.

("Residential pool pump" would mean a pump used to circulate and filter residential swimming pool water in order to maintain clarity and sanitation.)

Single Voltage External AC to DC Power Supplies. These products would have to

meet the energy efficiency requirements shown in Tables 2 and 3, where Ln (nameplate output) equals natural logarithm of the nameplate output expressed in watts.

Table 2

Nameplate Output Power	Minimum Efficiency in Active Mode
0 to < 1 watt	0.49 * Nameplate Output
≥ watt and ≤ 49 watts	0.09 * Ln (Nameplate Output Power) + 0.49
> 49 watts	0.84

Table 3

Nameplate Output Power	Maximum Energy Consumption in No-Load Mode
0 to < 10 watts	0.5 watts
≥ 10 watts and ≤ 250 watts	0.75 watts

This standard would apply to single voltage AC to DC power supplies that were sold individually and to those that were sold as a component of or in conjunction with another product. For purposes of this standard, the efficiency of single-voltage external AC to DC power supplies would have to be measured in accordance with the test methodology specified by the EPA's Energy Star Program, "Test Method for Calculating the Energy Efficiency of Single-Voltage External AC-DC and AC-AC Power Supplies (August 11, 2004)".

("Single-voltage external AC to DC power supply" would mean a device that meets all of the following:

-- Is designed to convert line voltage AC input into lower voltage DC output.
-- Is able to convert to only one DC output voltage at a time.
-- Is sold with, or intended to be used with, a separate end-use product that constitutes the primary power lead.
-- Is contained within a separate physical enclosure from the end-use product.
-- Is connected to the end-use product via a removable or hard-wired male/female electrical connection, cable, cord, or other wiring.
-- Does not have batteries or battery packs, including those that are removable, that physically attach directly to the power supply unit.
-- Does not have a battery chemistry or type selector switch and indicator light, or does not have a battery chemistry or type selector switch and a state of charge meter.
-- Has a nameplate output power less than or equal to 250 watts.)

State-Regulated Incandescent Reflector Lamps. These products would have to meet the minimum average lamp efficacy requirements for federally regulated incandescent reflector lamps contained in 42 USC 6295(i)(1)(A). The following types of incandescent reflector lamps would be exempt from these requirements:

-- Lamps rated at 50 watts or less of the following types: BR30, ER30, BR40, and ER40.
-- Lamps rated at 65 watts of the following types: BR30, BR40, and ER40.
-- R20 lamps of 45 watts or less.

("State-regulated incandescent reflector lamp" would mean a lamp, not colored or designed for rough or vibration service applications, with an inner reflective coating on the outer bulb to direct the light, an E26 medium screw base, a rated voltage or a voltage range that lies at least partially within 115 to 130 volts, and that falls into either of the following categories: a blown PAR (BPAR), bulged reflector (BR), or elliptical reflector (ER) bulb shape with a diameter equal to or greater than 2.25 inches; or a reflector (R), parabolic aluminized reflector (PAR), or similar bulb shape with a diameter of 2.25 to 2.75 inches, inclusive.)

Walk-In Refrigerators & Freezers. Walk-in refrigerators and walk-in freezers with the applicable motor types shown in Table 4 would have to include the following required components:

Table 4

Motor Type	Required Components
All	Interior lights; light sources with an efficacy of 45 lumens per watt or more, including ballast losses (if any)*
All	Automatic door closers that firmly close all reach-in doors
All	Automatic door closers that firmly close all walk-in doors no wider than 3.9 feet and no higher than 6.9 feet that have been closed to within one inch of full closure
All	Wall, ceiling, and door insulation at least R-28 for refrigerators and at least R-34 for freezers
All	Floor insulation at least R-28 for freezers (no requirement for refrigerators)
Condenser fan motors of under one horsepower	Electronically commutated motors, permanent split capacitor-type motors, or polyphase motors of one-half horsepower or more
Single-phase evaporator fan motors of under one horsepower and less than 460 volts	Electronically commutated motors
*This efficiency standard would not apply to LED light sources until January 1, 2012.	

Walk-in refrigerators and walk-in freezers with transparent reach-in doors would have to meet the following requirements:

-- Transparent reach-in doors would have to be of triple pane glass with either heat-reflective treated glass or gas fill.
-- If the appliance had an anti-sweat heater without anti-sweat controls, the appliance would have to have a total door rail, glass, and frame heater power draw of no more than 40 watts if it were a freezer or 17 watts if it were a refrigerator per foot of door frame width.
-- If the appliance had an anti-sweat heater with anti-sweat controls, and the total door rail, glass, and frame heater power draw were more than 40 watts if it were a freezer or 17 watts if it were a refrigerator per foot of door frame width, then the anti-sweat heat controls would have to reduce the energy use of the anti-sweat heater in an amount corresponding to the relative humidity in the air outside the door or to the condensation on the inner glass pane.

("Walk-in refrigerator" and "walk-in freezer" would mean a space refrigerated to temperatures, respectively, at or above and below 32 degrees Farenheit that can be walked into.)

Sale of Products Subject to the Bill

Except as provided for residential pool pumps, no new bottle-type water dispenser, commercial hot food holding cabinet, compact audio product, DVD player or recorder, liquid-immersed distribution transformer, medium voltage dry-type distribution transformer, metal halide lamp fixture, residential pool pump, portable electric spa, State-regulated incandescent reflector lamp, single-voltage external AC to DC power supply, or walk-in refrigerator or walk-in freezer could be sold or offered for sale in Michigan beginning January 1, 2010, unless the efficiency of the new product met or exceeded the efficiency standards set forth in the PSC's regulations.

Residential pool pumps that did not meet the specified standards could be sold in Michigan until January 1, 2012.

Waiver from Federal Preemption

Within six months after the bill took effect, the PSC, in consultation with the Attorney General, would have to determine if implementation of State standards for commercial boilers, pool heaters, and residential furnaces and residential boilers required a waiver from Federal preemption. If the Commission determined that a waiver was not needed, then on or after January 1, 2010, or one year after the date of the

determination, whichever was later, no new commercial boiler, pool heater, or residential furnace or boiler could be sold or offered for sale in Michigan unless the efficiency of the new product met or exceeded the bill's efficiency standards. If the PSC determined that a waiver was required, the Commission would have to apply for the waiver within one year of the determination. Upon approval of the waiver application, the applicable State standards would go into effect at the earliest date permitted by Federal law.

Installation of Products

One year after the date upon which the sale or offering for sale of certain products became subject to the bill's requirements, no product could be installed for compensation in the State unless the efficiency of the new product met or exceeded the bill's efficiency standards.

Changes to the Standards

The PSC could adopt, revise, modify, or amend the required regulations to establish increased efficiency standards for the products specified in the bill. Additionally, the PSC could establish standards for products not specified in the bill. In considering new or amended standards, the Commission would have to set efficiency standards upon a determination that increased efficiency standards would serve to promote energy conservation in the State and would be cost-effective for consumers who purchased and used new products, provided that no new or increased efficiency standards would become effective within one year following the adoption of any amended regulations establishing the increased standards.

The PSC could apply for a waiver of Federal preemption in accordance with Federal procedures for State efficiency standards for any product regulated by the Federal government.

Manufacturer Testing, Certification, & Identification

Manufacturers of products covered by the bill would have to test samples of their products in accordance with the test procedures adopted by the PSC. The Commission would have to adopt by rule test procedures for determining the energy efficiency of the specified products if they were not provided for in the bill. The PSC would have to adopt U.S. Department of Energy approved test methods or, in the absence of such methods, other appropriate nationally recognized test methods. The PSC could adopt updated test methods when new versions of test procedures became available.

Manufacturers of new products covered by the bill, except for single voltage external AC to DC power supplies, walk-in refrigerators, and walk-in freezers, would have to certify to the Commission that the products were in compliance with the bill. The certifications would have to be based on test results. The PSC would have to promulgate rules governing the certification of the products and would have to coordinate with the certification programs of other states and Federal agencies with similar standards.

Manufacturers of new products covered by the bill would have to identify each product offered for sale or installation in the State as in compliance with the provisions of the bill by means of a mark, label, or tag on the product and packaging at the time of sale or installation. The PSC would have to promulgate rules governing the identification of the products and packaging, which would have to be coordinated to the greatest practical extent with the labeling programs of other states and Federal agencies with equivalent efficiency standards. The PSC would have to allow the use of existing marks, labels, or tags that connoted compliance with the bill's efficiency requirements.

PSC Testing & Inspections

The Commission could test products covered by the bill. If the products were found not to be in compliance with the minimum efficiency standards, the PSC would have to charge the manufacturer for the cost of product purchase and testing, and make information available to the public on products found not to be in compliance with the standards.

With prior notice and at reasonable and convenient hours, the PSC could cause periodic inspections to be made of distributors or retailers of the covered new

products in order to determine compliance with the bill.

Violations & Penalties

The PSC would have to investigate complaints received concerning violations of the bill and would have to report the results of the investigations to the Attorney General. The Attorney General could institute proceedings to enforce the bill's requirements.

Any manufacturer, distributor, or retailer, or any person who installed a product covered by the bill for compensation, who violated the bill would have to be issued a warning by the PSC for a first violation. Repeat violations would be subject to a civil penalty of up to $250. Each violation would constitute a separate offense, and each day that the violation continued would constitute a separate offense. Penalties assessed for violations would be in addition to costs assessed for product purchase and testing.

PSC Rules

The Commission could promulgate further rules as necessary to ensure the proper implementation and enforcement of the bill's provisions.

Legislative Analyst: Julie Cassidy

FISCAL IMPACT

The bill would increase the costs of the Public Service Commission by an unknown amount. No fund source has been identified to pay for these expenses.

Any revenue received from civil penalties collected under the bill would go to the General Fund.

Fiscal Analyst: Elizabeth Pratt
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